



United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Illinois, Indiana
Michigan, Minnesota
Ohio, Wisconsin

U.S. EPA Proposes Clean-up Plan for Master Metals Site

Cleveland, Ohio

March 1999

Opportunities for Public Involvement

Public Meeting

U.S. EPA will explain the recommended clean-up plan for the Master Metals Site to the residents of Cleveland at a public meeting. Oral and written comments will also be accepted at the meeting.



Date: March 18, 1999

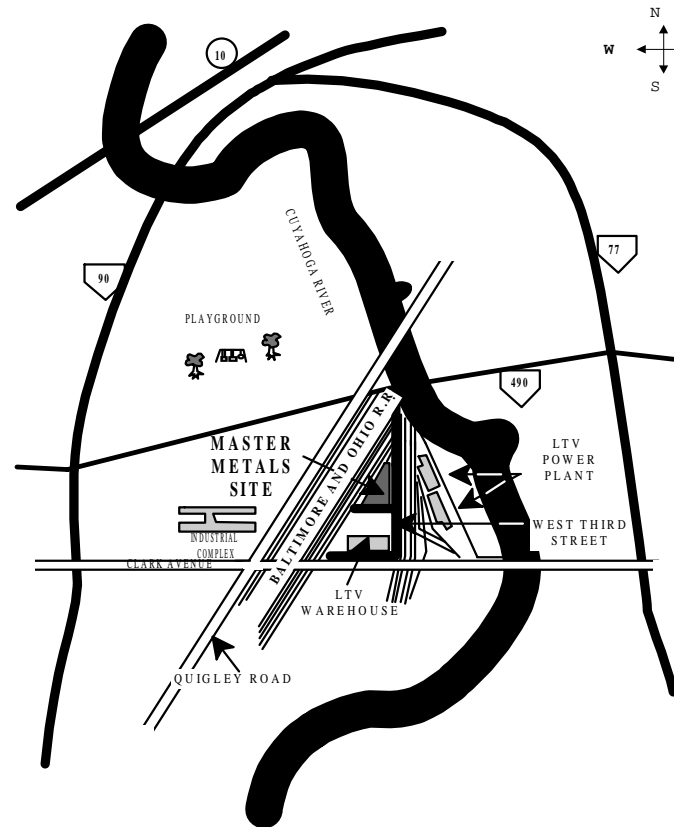
Time: 7:00 p.m.

Place: Pilgrim Congregational Church
Fellowship Hall
2592 West 14th Street
Cleveland, Ohio

Public Comment Period

U.S. EPA will accept written comments on its recommended clean-up plan presented in this Proposed Plan during a 30-day public comment period (see section entitled "Public Comment Period" on page 7). The comment period will be:

March 1 to March 31, 1999



Introduction

This **Proposed Plan** identifies the U.S. Environmental Protection Agency's (U.S. EPA) recommendation to clean up the contamination at the Master Metals Superfund Site in Cleveland, Ohio. (Words in **bold** are defined in the glossary on page 7.) In addition, the Plan summarizes other clean-up alternatives analyzed for this site. U.S. EPA will select a final remedy for the site after the public comment period has ended, and the information submitted during the comment period has been reviewed and considered.

U.S. EPA is issuing this Proposed Plan as part of its public participation responsibilities under the Superfund law called the **Comprehensive Environmental Response and Liability Act (CERCLA)**.¹

This Plan summarizes information that can be found in greater detail in the **Engineering Evaluation and Cost Analysis (EE/CA)** and other documents contained in the information repository for this site (see section entitled "Information Repository" on page 7). The EE/CA summarizes the types and amount of contamination at the site, and evaluates different methods to clean up site contamination.

¹Section 300.415 (b)(4)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Section 113 (k)(2) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) require publication of a notice describing U.S. EPA's recommended alternative. The EE/CA must also be made available to the public for comment. This Proposed Plan is a summary of information contained in the EE/CA for the Master Metals Site. Please consult the EE/CA for more detailed information.

U.S. EPA's Recommended Clean-up Plan

U.S. EPA's recommended alternative is Alternative 2 and includes:

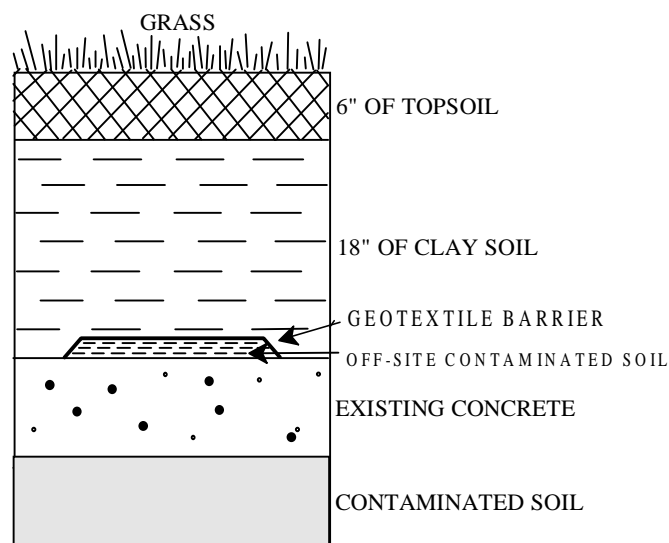
Excavation of Off-Site Contaminated Soils, Consolidation of Contaminated Soils On Site, Cover of Contaminated Areas with Two Feet of Clean Fill and Vegetation, Operation and Maintenance of the Cover for 30 Years, and Deed Restrictions to Minimize Potential Exposure of Contaminated Soil.

Workers will excavate contaminated soil located outside of the Master Metals property boundaries and move that soil on to the site. The off-site contaminated soil will be excavated to depths at which levels of lead are found at or below 1,000 **parts per million (ppm)** or until the original historical slag fill (waste material left over from neighboring industry which was deposited in this area in the early 1900s) is encountered. The level of 1,000 ppm of lead is considered by U.S. EPA to be safe for future workers at the site. The material will be tested to determine if lead-contaminated soil must be treated prior to consolidation. Treatment would involve mixing the lead with chemicals to bind the lead to keep the lead from moving into the surrounding soils. Before excavating off-site soil, workers will clear vegetation and remove the site fence. The off-site excavated areas will be filled with clean soil, planted with new vegetation, and the fence will be replaced. Care will be taken to ensure proper drainage to eliminate any run-off onto, or from, the Master Metals property.

The off-site areas being cleaned extend outward from the eastern, western, and southern boundary lines of the Master Metals property. These areas extend outward as follows: the eastern and southern off-site areas extend from the property line and end at the existing concrete curb of West Third Street; the western off-site areas extend outward from the property lines to where there is visual evidence of the divide between the manufacturing operations of the Master Metals facility and the eastern edge of the adjoining railroad spur.

On site, all areas will be backfilled to grade and all excavated off-site material will be consolidated on site. A thick plastic barrier (called a geotextile barrier) will be placed between the contaminated material and the clean fill to prevent mixing of the materials. All contaminated areas will

CROSS SECTION
OF ON-SITE COVER



then be covered with two feet of clean soil and clay, and vegetation will be planted. (See “Cross Section of On-Site Cover”.) To facilitate site re-use, the most severely deteriorated portions of the property will be covered with the geotextile barrier and clean soil. The areas not covered with the clean soil cover, will be sealed with asphalt, concrete, or a concrete sealer.

Cost: *Present Net Worth - \$537,040

This alternative is expected to result in complete removal of contaminated material at or near the surface and which presents a threat to trespassers and people involved in activities adjacent to the site. It significantly reduces the potential for direct contact with, breathing, and ingesting the contaminants because of the two feet of soil and the geotextile material covering the contaminated soil. The recommended alternative provides the same level of effectiveness, can be implemented, and costs less than the other alternatives considered. (See page 5 of this fact sheet for explanations of the other alternatives.)

*** Present Net Worth is the total cost of an alternative in terms of today's dollars, using a discount rate of 7 percent, and an operation and maintenance period of 30 years.**

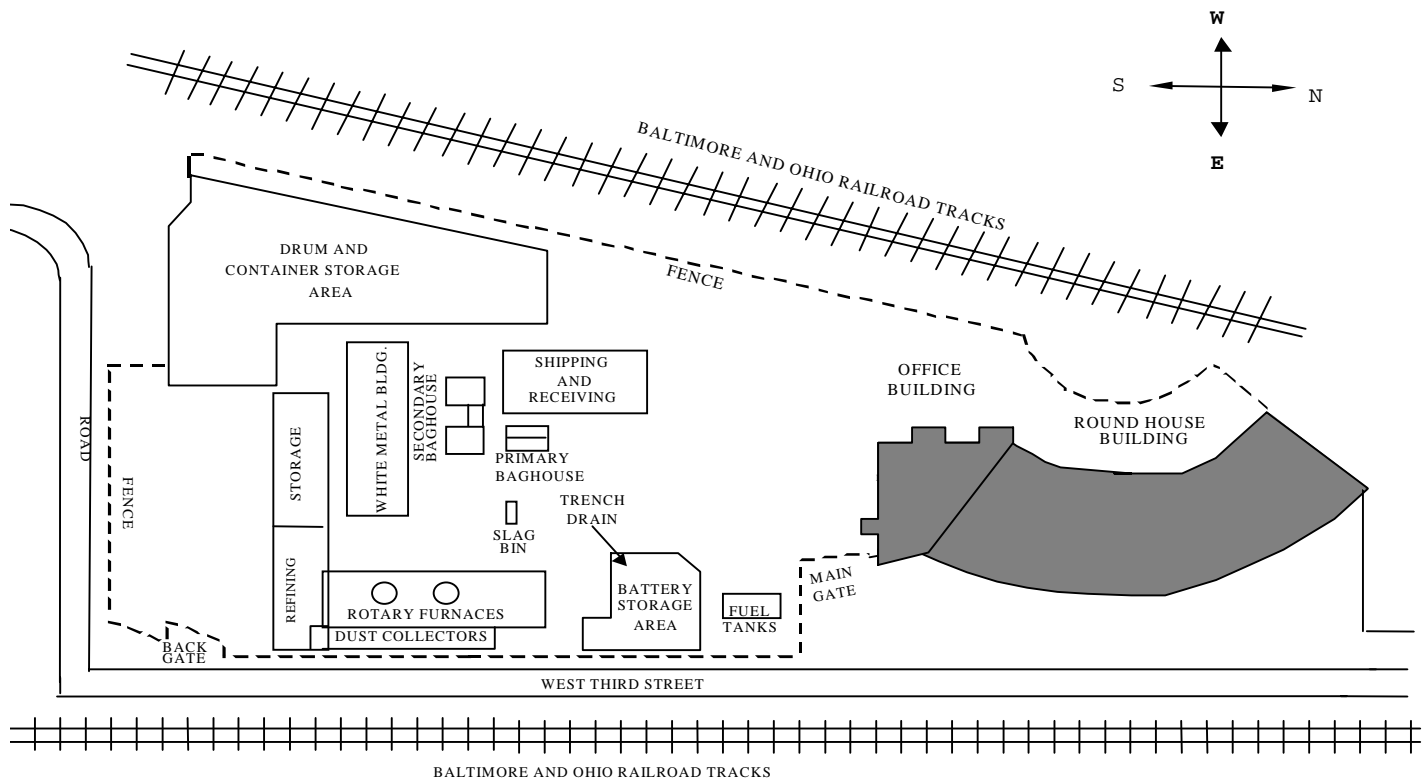
Site Location and Background


The Master Metals Superfund Site is located on West Third Street in Cleveland, Ohio. The site is approximately four acres in size and is triangular in shape. (See the site location map on page 1.) It is bordered on two sides by railroad tracks, with an LTV Steel facility located immediately to the east and south. The surface of the property is covered primarily by concrete foundations and pads with small trees, brush, and weeds being the only vegetation present outside the fence. Structures on the site consist of a two-story office building, a round house (a railroad building used for repairing train cars), and concrete foundation walls remaining from demolition activities conducted during a 1997 interim cleanup at the site. (See the diagram of the site below.) The site is located in a heavily industrialized area where virtually all land use within 1/4 mile of the site is used for industrial purposes. The nearest residential area is approximately 1/4 mile northwest of the site.

Between 1933 and 1979, NL Industries, Incorporated (NL) owned a secondary **lead** smelter. Spent lead acid batteries and various other lead materials were melted at the facility and made into lead bars. In 1935, NL installed a baghouse to capture lead dust and other dust particles generated by

two rotary furnaces. In 1968, NL constructed three more baghouses to capture dust particles generated by the refining kettles and other equipment that was producing exhaust.

In 1979, NL sold the plant to Douglas Mickey, who continued to operate the plant under the name Master Metals, Incorporated. During its operations, Master Metals processed lead acid batteries and a variety of other lead-bearing materials using a secondary smelting process. Rotary furnaces and refining kettles were used to convert the lead-bearing materials into lead bars. Master Metals received lead-bearing materials from various sources. Lead-bearing materials, other than batteries, were stored either in bins, boxes, or drums or directly on the ground. Batteries were either stored in the former dismantling building (now the container storage area) or in the battery storage area. Batteries were cracked in the battery storage area near the main gate. The lead portions of the batteries were then transferred to the facility's furnaces for reclamation. A baghouse was used to collect dust particles. Waste by-products were recycled in the facility's furnace. The finished lead bars were stored in the round house at the north end of the property prior to shipment to battery manufacturers. Four 500-gallon above ground storage tanks were used to store diesel fuel, motor oil, gasoline, and hydraulic fluid.



 Buildings Remaining on the Property After the 1997 Interim Cleanup

Facility History

Master Metals had a long history of violations of various local, state, and federal environmental, health, and safety laws; poor operating practices; and releases of hazardous materials to the environment. These violations included repeated employee exposure to airborne lead concentrations greater than **Occupational Safety and Health Administration (OSHA)** standards in both the front office and in the employee lunch room, lack of respiratory protection, and improperly labeled hazardous waste containers. In at least 41 instances, employees were not informed when their blood lead concentrations exceeded OSHA standards nor were they removed from their work areas. OSHA later discovered that some of the blood lead data it received was altered by Master Metals to reflect lower blood lead concentrations in Master Metals employees.

In 1990, sampling of soil and ground water conducted by Master Metals revealed elevated levels of lead and other contaminants. In 1992, U.S. EPA sampling of soil on and around the facility revealed lead concentrations 200 times higher than waste regulatory levels established by the **Resource Conservation and Recovery Act (RCRA)** in most sampling locations.

In 1992, air sampling conducted by Ohio EPA indicated that air quality immediately downwind of Master Metals exceeded the air quality standards called **National Ambient Air Quality Standards (NAAQS)**. In August 1992, Ohio EPA ordered an immediate 30-day shutdown of the facility because of Master Metals's life-threatening violations of the air quality standards for lead. In August 1993, Ohio EPA ordered Master Metals to cease operations until it could demonstrate compliance. Master Metals did not re-start operation after this shutdown.

Site Investigation

In June 1994, U.S. EPA conducted a Site Screening Inspection (SSI) for the Master Metals Site. From the inspection, a Site Evaluation Report (SER) was completed which documented the contamination associated with the site. The SER is in the information repository. The results of the inspection are outlined below.

Air

U.S. EPA determined that workers had been exposed to lead concentrations in the air above air quality standards. The results of the air sampling indicated that wind had blown lead materials from the furnace stacks and waste piles into the air. Air samples collected downwind of Master Metals detected lead dust emissions which exceeded air quality standards by as much as 33 times.

Ground Water

Analysis of ground-water samples collected on site revealed lead concentrations as high as 1.35 **milligrams per liter mg/L** and **chromium** concentrations as high as 1.33 mg/L. Both of these levels of these contaminants are above federal drinking water standards, however, the ground water is not a source of drinking water in the area.

Surface Water

Wastewater from the site was discharged into a Northeast Ohio Sewerage District Sewer and then into the Cuyahoga River.

Soil

Soil samples collected in 1992 on the site revealed lead concentrations ranging from 6,020 to 115,000 ppm. These levels are 6 to 115 times higher than the level at which cleanup is required. Health professionals consider 1,000 ppm to be a safe level for industrial workers.

Removal Action

On April 17, 1997, 53 potentially responsible parties agreed to conduct an interim cleanup which occurred in two phases. During Phase I, the following clean-up activities took place:

- Analysis and mapping of waste materials on site.
- Installation of fences, signs, and other barriers.
- Excavation, demolition, consolidation, and/or removal of highly contaminated buildings, structures, soils, loose waste materials, loose industrial by-products, construction materials, demolition debris, machinery, garbage, dust, and office or industrial equipment to reduce the spread of, and direct contact with, the contamination.
- Removal of drums, barrels, tanks, or other bulk containers that contained hazardous substances to reduce the likelihood of spillage or exposure to humans, animals, and/or the food chain.
- Containment, treatment, and disposal of hazardous materials to reduce the likelihood of human, animal, or food chain exposure.

This work was performed between June 9, 1997, and January 6, 1998. In addition, field samples were collected in preparation for the EE/CA report.

As part of the Phase II cleanup, the potentially responsible parties were required to develop and submit an EE/CA to determine the nature and extent of the contamination and evaluate clean-up alternatives to clean up the site.

An additional cleanup was conducted in a residential area on

Holmden Avenue that received lead-contaminated fill material. The Holmden properties were sampled in April 1997 by the potentially responsible parties. At that time, elevated levels of lead were found in the soil on the property. Subsequently, in November 1997, approximately 1,500 cubic yards of contaminated soil were removed from the Holmden Avenue properties, treated (as described in Alternative 2), and stockpiled on the Master Metals Site. Clean soil was placed in the excavated areas, regraded, and vegetation was planted.

After a site visit conducted by U.S. EPA in November 1998, U.S. EPA directed the potentially responsible parties to improve security, provide additional hazard signs, and cover the contaminated soil stockpiled on site.

Summary of Site Risks

The Master Metals Site is in a heavily industrialized area with little or no foot traffic. Therefore, exposure to passersby or sensitive individuals like children is extremely low. Nonetheless, there currently remains a potential risk to people both on- and off-site from lead contaminated soil. The degree to which the Master Metals Site will be cleaned up was determined by the intended future use of the site. For the purposes of the risk assessment, U.S. EPA determined that the future use of the site would remain industrial. Therefore clean-up levels were based on scenarios for potential exposure to future workers (i.e. construction workers and others) through breathing, ingesting, or direct contact with soil or dust contaminated with lead at the site. This “industrial level” is 1,000 ppm and is considered to be safe for future workers at the site – including any pregnant worker.

Environmental Risks

The Master Metals Site is located in a heavily industrialized area. Approximately 90 percent of the surface of the property is covered by concrete with small trees, brush and weeds being the only vegetation which are outside the site fences. Therefore, there is little if any impact from contaminated soils on any ecologically sensitive area.

Summary of the Other Clean-up Alternatives

The alternatives analyzed for the site are presented below. Detailed information on each of the alternatives is available in the EE/CA located in the information repository at the Jefferson Branch of the Cleveland Public Library.

Regardless of the alternative selected, the following features will be implemented or will continue to be implemented:

- Deed restrictions and institutional controls, including restrictions on private well use.
- Site access restrictions, including fencing, locked gates, and warning signs.
- Cover maintenance.

Alternative 1 – No Action The Superfund program requires that a “no-action” or “no-further-action” alternative be considered at every site as a basis of comparison to other alternatives. This no-action alternative assumes that nothing additional would be done to address any human health or environmental concerns. However, site security would be implemented by ensuring that the existing chain link fence would be sufficient to prohibit access to the property and that “No Trespassing” signs would be visible on the fence.

Cost: Present Net Worth - \$0

This alternative was not selected for the site because U.S. EPA concluded that clean-up actions are needed to adequately protect human health and the environment.

Alternative 2 – (See “U.S. EPA’s Recommended Clean-up Plan” on page 2.)

Alternative 3 – Off-Site Excavation, On-Site Consolidation, On-Site Capping, and Operation and Maintenance This alternative is similar to Alternative 2 except that it involves placing an asphalt cap on top of the geotextile material instead of vegetation.

Cost: Present Net Worth - \$855,140

Alternative 4 – Off-Site Excavation, Treatment, Off-Site Disposal, On-Site Capping, and Operation and Maintenance This alternative involves excavating off-site contaminated soil, treating the soil if necessary (as described in Alternative 2), and disposing of the soil at a permitted off-site disposal facility. The excavated off-site areas would then be filled in with clean fill, covered with a geotextile material, clean soil would be placed on top, and vegetation would be planted. The contaminated on-site soil, currently covered with a layer of concrete, would be covered with clean soil for grading purposes and capped with a 4-inch layer of asphalt.

Cost: Present Net Worth - \$986,660

Evaluating the Recommended Alternative

The alternatives were evaluated against three evaluation criteria – effectiveness, implementability, and cost. Alternative 2 compared more favorably to the evaluation criteria than did the other alternatives. The degree to which all alternatives meet the evaluation criteria, as determined by U.S. EPA, is shown in the Table entitled “Comparison of Alternatives Against the Evaluation Criteria” below.

U.S. EPA believes that Alternative 2 meets the criteria and provides the best balance of trade-offs with respect to the evaluation criteria. Based on available information, U.S. EPA also believes that the recommended alternative protects human health and the environment by treating or containing all significant threats at the site, thereby reducing risks to human health and the environment to acceptable levels for industrial areas. This alternative would also comply with other applicable laws, would be cost effective, and would use permanent solutions. In addition, the recommended alternative minimizes the amount of waste which would be transported

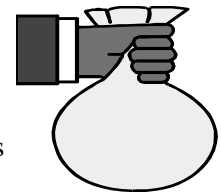
Explanation of the Evaluation Criteria

1. Effectiveness. The length of time needed to implement a clean-up alternative is considered. U.S. EPA also assesses the risks that carrying out the clean-up alternative may pose to workers and nearby residents during implementation.



2. Implementability. An assessment of how technically or administratively difficult the clean-up alternative will be to implement. This criteria takes into account the availability of goods and services.

3. Cost. A comparison of the costs of each alternative. Includes capital, operation, and maintenance costs as well as present net worth costs. Present net worth cost is an alternative’s total cost over time in terms of today’s dollars.



Comparison of Alternatives Against the Evaluation Criteria

| Criteria | Alternative 1 No Action | Alternative 2 Off-Site Excavation, On-Site Consolidation, On-Site Cover, and | Alternative 3 Off-Site Excavation, On-Site Consolidation, On-Site Capping, and O & M | Alternative 4 Off-Site Excavation, Treatment, Off-Site Disposal, On-Site Capping, and O & M |
|-------------------------|---|--|--|--|
| Effectiveness | Not protective of human health. Site risks still Persist. | Partially Meets Potential short-term risks during implementation. Would take 3 – 4 weeks to complete | Partially Meets Potential short-term risks during implementation. Would take 4 – 5 weeks to complete | Partially Meets Potential short-term risks during implementation. Would take 5 – 6 weeks to complete |
| Implementability | Not Applicable | Meets Technically easy to implement | Meets Technically easy to implement | Meets Technically easy to implement |
| Cost | \$ 0 | \$ 537,040 | \$ 855,140 | \$ 986,660 |

Note: Precautions will be taken to minimize potential risks during the cleanup.

Glossary

Chromium – A metal used in the electroplating industry to protect against corrosion and in paints to help adhere to metal. Ingesting high doses can cause hemorrhages of the digestive tract, while inhalation over a long period of time can cause lung and other respiratory cancers.

Comprehensive Environmental Response and Liability Act (CERCLA) - A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The Act created a special tax that goes into a trust fund, commonly known as Superfund, to investigate and clean up hazardous waste sites. Under the program, U.S. EPA can:

- pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work
- take legal action to force parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the cleanup.

Engineering Evaluation and Cost Analysis (EE/CA) - An EE/CA analyzes clean-up alternatives for a site. It provides a framework for evaluating and selecting alternative clean-up technologies and identifies which clean-up alternatives would work best with the site's specific conditions, contaminants, and risks posed.

Lead – A metal commonly found in plumbing, automotive batteries, foil, and solder, which can be toxic by ingesting or inhaling contaminated dust and fumes. It accumulates in the body, and can build up to dangerous levels over long periods of time. It can cause brain, bone, and nerve damage.

Milligrams Per Liter (mg/L) - The liquid equivalent of parts per million.

National Ambient Air Quality Standards (NAAQS) - Standards under the Clean Air Act requiring states to develop a plan for implementing air quality standards and establishing maximum air pollutant emission standards.

Occupational Safety and Health Administration (OSHA) - A federal agency charged with oversight and regulation of workplace health and safety.

Parts Per Million (ppm) - In everyday terms, one part per million would be equal to one second in 11 days.

Proposed Plan – A document summarizing the clean-up alternatives U.S. EPA has considered for controlling contamination at a Superfund site. The Proposed Plan includes the alternative that U.S. EPA recommends for a particular site.

Resource Conservation and Recovery Act (RCRA) - A federal law that regulates management and disposal of hazardous materials and wastes that are currently being generated, treated, stored, disposed, or distributed.

Public Comment Period

U.S. EPA has established a public comment period to give the community an opportunity to comment on the EE/CA and Proposed Plan. The comment period begins on March 1, 1999 and ends on March 31, 1999. Written comments must be postmarked no later than March 31, 1999 and should be sent to Bri Bill, U.S. EPA Community Involvement Coordinator (see section entitled "For More Information" on the back page).

U.S. EPA may modify the Proposed Plan or select another clean-up alternative from the EE/CA based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the clean-up alternatives in the EE/CA.



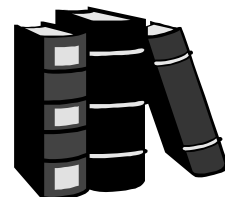
At the conclusion of the comment period, U.S. EPA will review all of the comments it receives before making a final decision. U.S. EPA will respond to the comments in a document called a Responsiveness Summary. The Responsiveness Summary will be placed in the information repository.

Information Repository

U.S. EPA has established a file for public review called an information repository. The information repository contains documents related to the project and the Superfund Program. The repository is located at:

Jefferson Branch
Cleveland Public Library
850 Jefferson Avenue
Cleveland, Ohio

Phone: (216) 623-7004



The Next Step

U.S. EPA, in consultation with the Ohio EPA, will evaluate public comments received during the public comment period before U.S. EPA selects a final clean-up plan. The final clean-up plan will be described in a final decision document that will be available for public review.

After a final plan is chosen, the plan will be designed and implemented.

For More Information

For more information about the public comment period, public meeting, Proposed Plan, or any other aspects of the Master Metals project, please contact:

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Use This Space to Write Your Comments

Your input on the recommended clean-up plan for the Master Metals Site is important to U.S. EPA. Comments provided by the public are valuable in helping U.S. EPA select a final clean-up plan for the site.

You may use the space below to write your comments. You may hand this in at the March 18, 1999 public meeting or fold and mail to the address for Bri Bill on the back page of this fact sheet. Comments must be postmarked no later than March 31. If you have any questions, please contact Bri Bill at (312) 353-6646, or toll-free at 1-800-621-8431. Comments may also be faxed to Bri at (312) 353-1155 or sent via email to: bill.briana@epa.gov

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Name_____

Affiliation

Address

City _____ State _____

Zip_____

Master Metals Site Comment Sheet

Detach, fold, staple, stamp, and mail

Name_____

Address_____

City_____State_____

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Place
Stamp
Here

Bri Bill
Community Involvement Coordina-
tor
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